

THE ILLUSTRATED
Journal of Agriculture

Montreal, April 1, 1896.

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Notes by the Way.

Fall-wheat.—Mr. David Crawford, whom every Montrealer knows, has bought a large farm—about 250 acres—at River-Beaudette. He did a bold thing last autumn, when he sowed 4 acres of wheat, which we hope will turn out well, but the thaw in the latter part of December, following the zero weather in the early part of that month, is against it. Another thing: the seed was put in broadcast, and therefore not deep enough, as it

could only be covered with simple harrowing. Fall wheat should be ploughed or drilled in from 3 to 4 inches deep.

We advised Mr. Crawford to harrow his wheat as soon as the land is dry enough in the spring; then, the grass-seeds should be sown and the roller passed over the piece, which will bury them quite deep enough.

The farmers in the Côteau district, Mr. Crawford tells me, are very anxious to improve. Unfortunately, there is no Agricultural Society or Farmer's Club there, but they have applied to the Ottawa Government for a lecturer, and it seems that M. J. C. Chappais is expected to pay them a visit before long.

As to cattle, Mr. Crawford proposes to introduce some thoroughbred Shorthorns, from Ontario, but, as it is a dairy-district, he had better be careful in his selection, for the milking strains of that breed are not common. He very sensibly says he wants a lot of cows that are good for something in the butcher's line of business after they have done their duty as providers of raw material for the dairy. Will no one ever get a small herd of the true Dairy-Shorthorn by way of a beginning?

"Hoard's Dairyman"—and the end of the cow—had, in one of its later issues, a paragraph that rather astonished us: "It does not pay a dairyman to consider the feeding of veal-calves or the fattening of old cows. He can put new milk and feeding stuffs to more profitable uses in the manufacture of butter and cheese."

What is to become of the bull-calves, then? And the old cows; are they to be knocked on the head and thrown into the nearest ditch? We take it Mr. Horsfall, the great London dairyman, knows his business quite well as the writer in *Hoard*, but then he does not keep Jerseys, but the sadly maligned Dairy Shorthorns, of which *Hoard* has so mean an opinion.

Mr. Horsfall buys *strippers*, or cows some six months after calving, and, by judicious feeding, so increases their yield of milk as to make a fair profit out of this alone, and also to increase the weight and value of the carcass in six or eight months, so as to sell them for 50% more than what they cost him. As the late E. W. Stewart said. A system that can produce milk profitably while fattening the cow, must have some merits worthy of adoption.

How to treat old cows.—This system must of course depend upon the condition of the cow being kept up while giving a large yield of milk. The rations given to Mr. Horsfall's cows are compounded of the following materials:

FOOD FOR SIX COWS (for 191 days).
Per day.

Meadow-hay.....	56 lbs.
Rape cake.....	30 "
Malt cummins.....	9 "
Bran.....	9 "
Bean-meal.....	9 "
Roots, etc.....	204 "
Oat straw.....	50 "
Bean-straw.....	12 "
379 lb.	

Equal to 63 1/2 lbs. per head per day. Pease meal and pease-straw may in this country take the place of beans.

Of these six *strippers* the following is the yield of milk during 191 days, and their respective gain in live weight:

No. of cow.	Total Yield.		Gain in weight.
	days.	lbs.	
1	203	5,202	84
2	189	7,749	140
3	217	8,354	168
4	175	6,725	28
5	175	5,833	56
6	189	6,652	28
Average of all.....	21	6,752	84

To say nothing of the value of the dung, which at the usual price of cow-house-dung in London was certainly worth \$14.00 a cow. Professor Way, who analysed the manure from these six cows, returned the following statement:

Nitrogen.....	414 lbs
Phosphoric acid.....	393 "
Potash.....	585 "

Which at a reasonable valuation should be worth \$87.38: as for valuing the nitrogen, etc., of dung at the same price as in commercial fertilisers, that is an absurdity that no one but a pure theorist would ever fall into.

Wheat in Britain.—Ninety-five % of all the wheat grown in Britain is produced in England. Even in Wales, one-third more wheat was grown than in Scotland, in which latter country, in 1895, there were only 33,641 acres of that cereal. Trust Scotland for knowing her own interest: oats pay better than wheat nowadays, though the average wheat-crop of Scotland is generally 35 bushels an acre to England's 30.

POULTRY-MANURE.

Comparison with guano—Poultry-food—Composition of guano—Value—Anderson's analysis of poultry-dung, &c., &c.

Guano is the dung and urine of sea-fowls feeding on fish alone. It is, except in the upper layers, of unknown age, and heat and pressure—by its own weight—have combined to condense and solidify it.

Poultry, on the other hand, feed on grain and seeds with a good deal of other vegetable matters, such as grass, cabbage, &c.; their droppings are recent and raw, and instead of containing only 7% to 8% of water, like guano, they rarely contain less than 50%. The two chief manurial constituents of both poultry-manure and guano are ammonia and phosphate of lime; potash is present in each, but in such very small quantities that it may be left out of our consideration.

The following shows the analysis of a good sample of Peruvian guano as it is found to day, and its value, at present prices, per ton of 2000 lbs.

Ammonia 12 % = 240 lbs., at 12 cts.....	\$28.80
Phosphate of lime (bone-earth) 30 % = 600 lbs. at 2 cts....	12.00
Potash 4 % = 80 lbs. at 4 cents.....	3.20

	\$44.00

Dr Uro's analysis of Peruvian guano in its best days, when it gave 14 % of nitrogen = 17 % of ammonia, stands thus:

Water.....	7.83
Organic matter containing ammoniacal salts.....	59.85
Chloride of sodium, sulph. of soda, phosph. of potash.....	12.24
Phosphates of lime and magnesia.....	15.15
Carbonate of lime.....	.97
Sand and other impurities.....	3.39

	99.43

Now, let us see what the composition of *hen's dung* is, according to Anderson, chemist to the Highland Society of Scotland:

Water.....	60.38
Organic matter and ammoniacal salts.....	19.22
Phosphates.....	4.47
Carbonate of lime.....	7.65
Alkaline salts.....	1.09
Sand and other impurities.....	6.69

	100.00

Ammonia.....	0.74
Phosphoric acid.....	2.05 (about)

So, in a ton of guano—quality as above—compared with an ton of hen's dung, there is only 1/4 as much water, but, in revenge, there is 16 times as much ammonia, and many times as much phosphate of lime.

The analysis of mixed horse, cattle- and pig-dung, by Voelcker, *per se*, chemist to the Royal Agricultural Society of England runs thus:

Water.....	66.17
Organic matter.....	28.24
Inorganic do.....	5.59

	100.00

Containing ammonia..	.78
Phosphate of lime..	12.23
Potash.....	12.14

All these samples were collected in a fresh state, and analysed after being dried at 212° F.

Well might Prof. Anderson conclude his report to the Highland and Agricultural Society of Scotland with these words. The three kinds of poultry-dung: hens', geese', and ducks', hardly, if at all, exceed farm yard manure in value.

Feeding milch-cows.—All the Montreal milkmen whom we have met say that they feed their cows four and some of them five times a day.

Mrs Jones of Brockville, one of the most successful of dairy-women, feeds her Jerseys as follows:

In winter, the stalls are cleaned out at 5 A. M., the cows are brushed off, and each receives a feed of silage with the proper quantity of meal and bran mixed with it, according to the milk they are giving. They are then milked, each gets an armful of hay, and the hands go to breakfast.

Towards noon, they are watered, and on returning to the stable, each cow finds a feed of sliced roots in her box with a handful of meal or bran sprinkled over it.

At four P. M., they are all offered water in pails, and receive their second feed of silage and meal.

At five P. M., milking, begins, after which each cow receives a liberal feed of hay and fresh bedding, and is then left for the night.

At any rate this makes four feeds a day, at least.